

Customer No.: 31561
Docket No.: 10545-US-PA
Application No.: 10/708,664

REMARKS

Present Status of Application

Claims 1-21 remain pending in the application. The Office Action mailed November 14, 2005, objected the drawings for not showing every feature. Claims 3-4 and 10-11 were rejected under 35 U.S.C. 112, second paragraph, for being indefinite. Claims 1, 2, 5, 6, 8, 9, 12, 13 and 15-17 were rejected under 35 U.S.C. 102(e) as being anticipated by Kung (US Publication No. 2003/0222352). Claims 7 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kung in view of Petit (US Patent No. 6,399,475). Claims 18-21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kung.

Claims 1 and 8 have been amended. Claims 3-4 and 10-11 have been amended for clarification purposes, while claims 7, 14 and 18-21 have been cancelled. Applicant believes that these changes do not introduce new matter and reconsideration of those claims is respectfully requested. In view of the above amendments and the following discussions, a notice of allowance is respectfully solicited.

Discussion for the objections of drawings

The drawings were objected under 37 CFR 1.83(a), for not showing every feature specified in the claims, especially "the wetting-barrier post" and "the thickness of the

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wetting-barrier post is larger than the thickness of the adhesion layer" in claims 18-19 and 21.

Claims 18-21 have been cancelled. Withdrawn of these objections is respectfully requested.

Discussion for 35 U.S.C. 112 rejections

Claims 3-4 and 10-11 were rejected under 35 U.S.C. 112, second paragraph, for being indefinite, especially the term "if".

Claims 3-4 and 10-11 have been amended to replace the term "if" with the term "when", for clarification purposes.

Reconsideration and withdrawn of these rejections are respectfully requested.

Discussion for 35 U.S.C. 102 and 103 rejections

Claims 1, 2, 5, 6, 8, 9, 12, 13 and 15-17 were rejected under 35 U.S.C. 102(e) as being anticipated by Kung (US Publication No. 2003/0222352).

Claims 1 and 8 have been amended to provide more descriptions according to the present invention, while claims 7 and 14 have been cancelled. Supporting grounds for the amendments can be found in at least page 7-8 of the specification and figure 2.

Applicant respectfully asserts that the structure of claim 1 or 8 is patentably

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distinct from the prior art references. Especially, the structure comprises "the wetting-barrier layer only covers an upper surface of the barrier layer" or "the wetting-barrier layer has a thickness larger than that of the adhesion layer or that of the barrier layer".

Regarding the 102 rejections of independent claim 1 and/or 8:

Kung merely discloses an under bump metallurgy layer including a metallic layer 210 on the bonding pad 16 and a buffer metallic layer 220 between the metallic layer 210 and the bump 18 (paragraph [0025]). The metallic layer 210 includes an adhesion layer 212, a barrier layer 214 and a wettable layer 216. As shown in Figure 2A, the buffer metallic layer 220 is disposed on layer 216 and covers the sidewalls of layers 212/214/216. Moreover, the bump 18 is disposed on the buffer metallic layer 220.

The Office Action considered Kung's bump 18 and layers 212/214/216 being respectively comparable to the bump and the adhesion/barrier/wetting-barrier layers of this invention.

As discussed above, based on Kung's Figure 2A and the related contexts, it is obvious that bump 18 is not equivalent or comparable to "bump disposed on the wetting-barrier layer" as recited in amended claim 1 or 8 of this invention. Further, it is impossible to consider Kung's layer 220 as comparable to the wetting-barrier layer of this invention because Kung's layer 220 covers the sidewalls of the composite layer 210.

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Therefore, Kung fails to disclose each and every limitation recited in amended claim 1 or 8, especially the anti-oxidation layer.

Accordingly, the independent claim 1 or 8 clearly distinguishes the present invention over the cited reference Kung.

Dependent claims 2-6, 9-13 and 15-17 are submitted to be patentably distinguishable over the cited references for at least the same reasons as independent claim 1 or 8, from which these claims respectively depend, as well as for the additional features that these claims recite.

Reconsideration and withdrawal of these rejections under 35 USC 102(e) are respectfully requested.

Claims 7 and 14 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kung in view of Petit (US Patent No. 6,399,475). Claims 18-21 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kung.

Claims 7, 14 and 18-21 have been cancelled.

Withdrawal of these rejections under 35 USC 103(a) is respectfully requested.

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CONCLUSION

In view of the foregoing, it is believed that all pending claims are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

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Respectfully submitted,

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